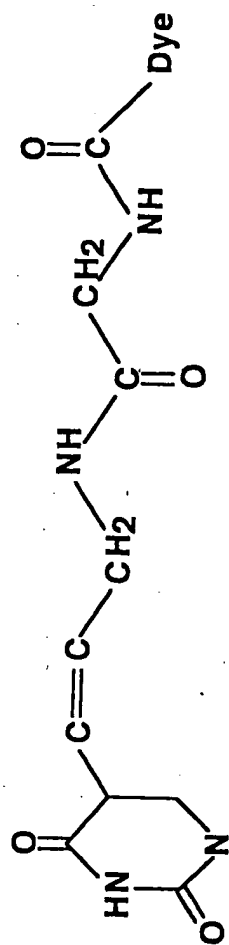


Diglycinylnyl linker



Tetraglycinylnyl linker

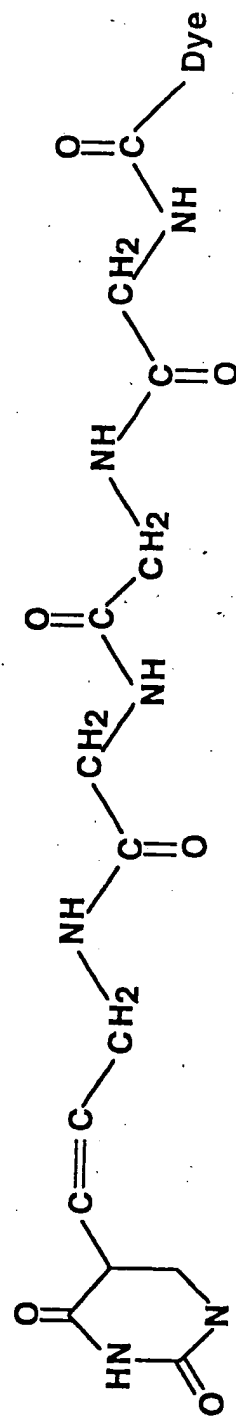
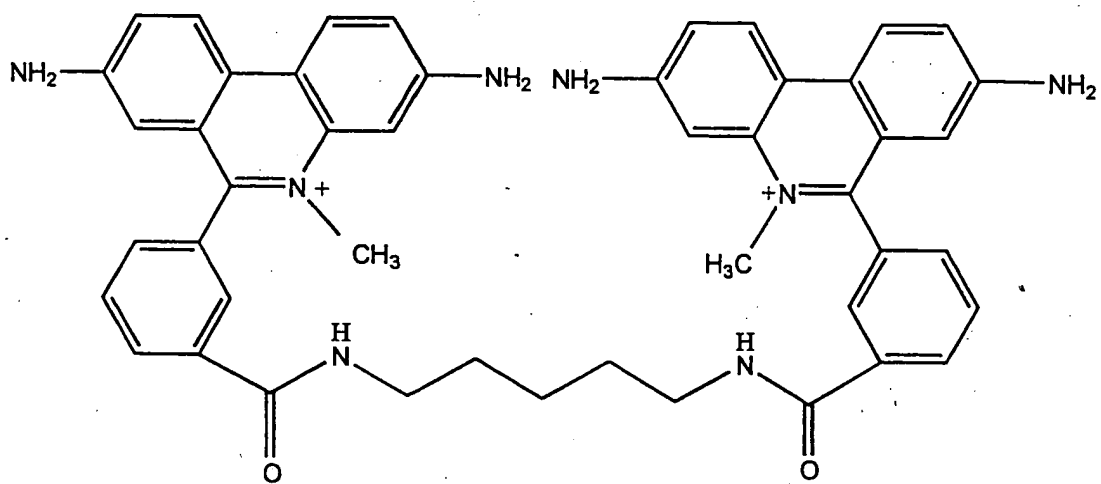
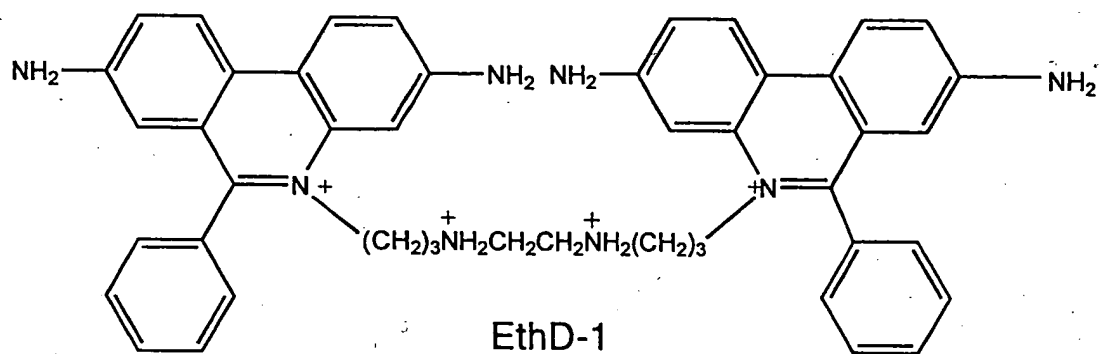


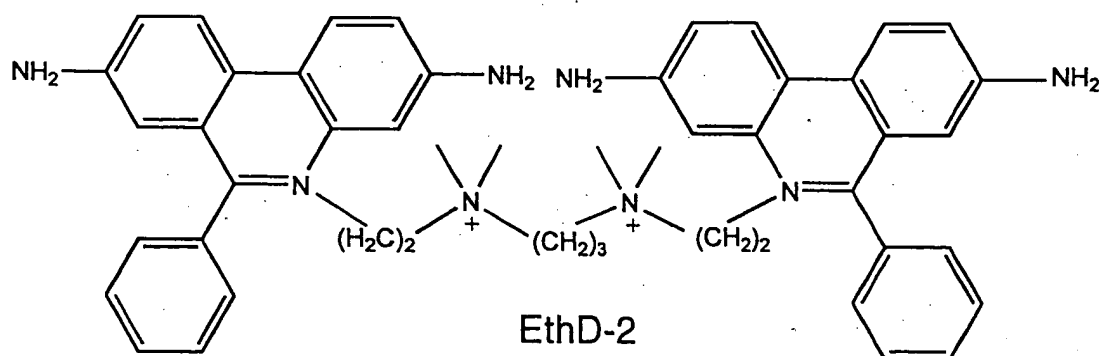
Figure 1



meta-EthD



EthD-1



EthD-2

Figure 2

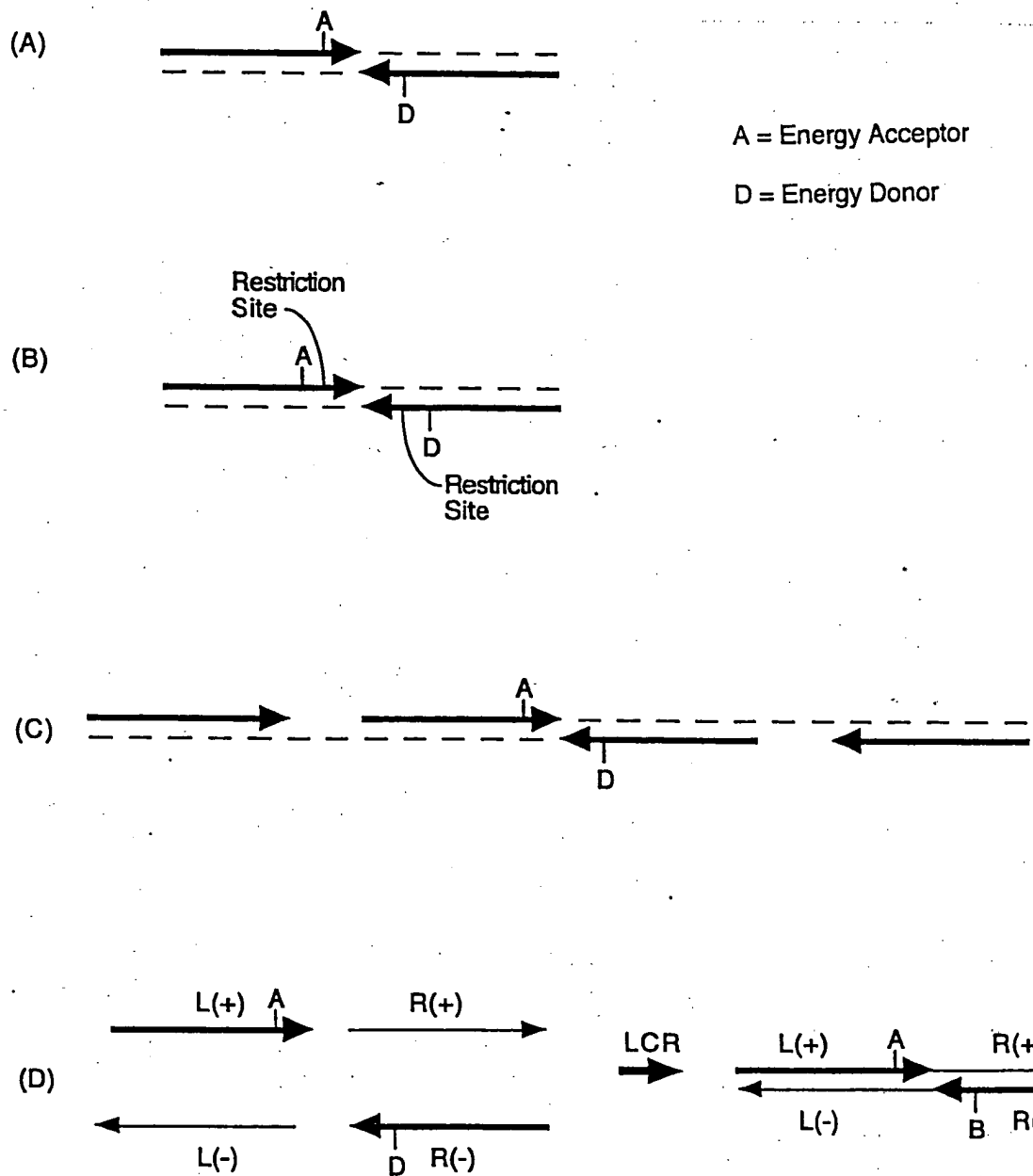


Figure 3

Target Sequence

——GCGACCTGCGAATGCTATGGATCAGGCTAGCCA——
——CGCTGGACGCTTACGATACCTAGTCCGATCGGT——

(A)

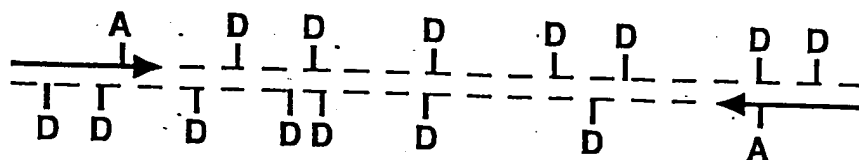
Donor
↓
GCGACCTGCGAATGCTATggatcaggctagcca
cgctggacgcttacgataCCTAGTCCGATCGGT
←
↓
Acceptor

(B)

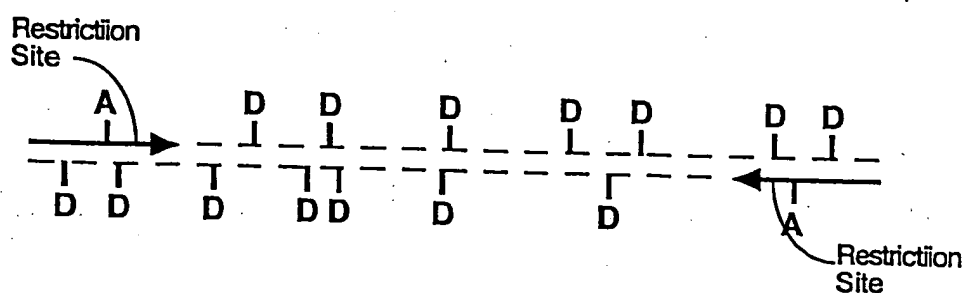
Donor
↓
GCGACCTGCGAATGCTATggatcaggctagcca
cgctggacgcttacgatacctAGTCCGATCGGT
←
↓
Acceptor

Figure 4

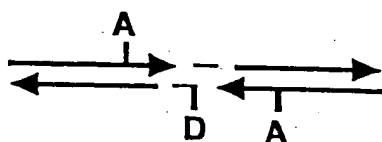
(A) PCR



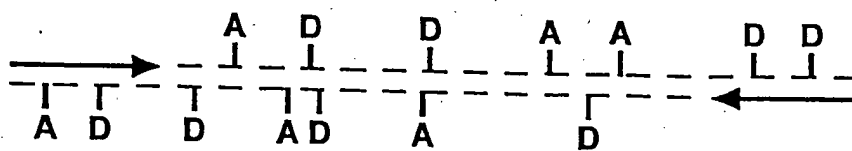
(B) SDA



(C) GAP-LCR



(D) PCR

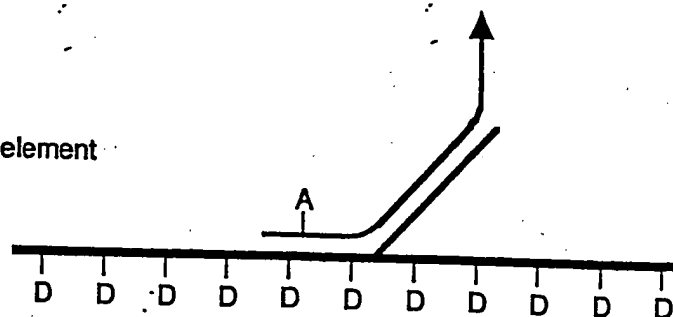


A = Energy Acceptor

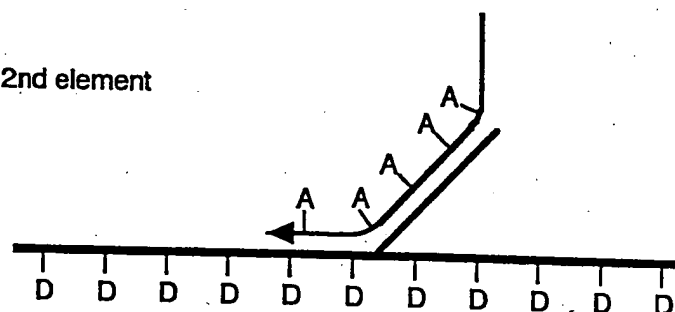
D = Energy Donor

Figure 5

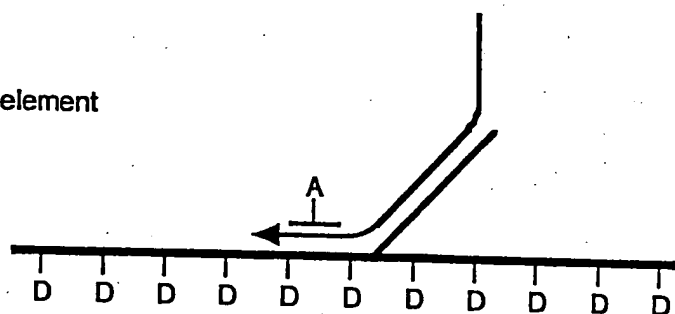
(A) Primer with 2nd element



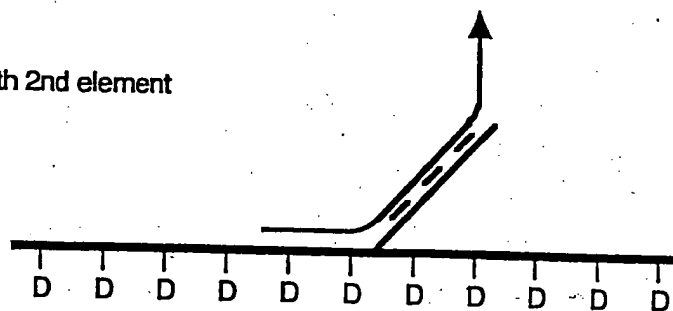
(B) Nucleotide with 2nd element



(B) Probe with 2nd element



(B) Intercalators with 2nd element



D = Energy Donor
A = Energy Acceptor

Figure 6

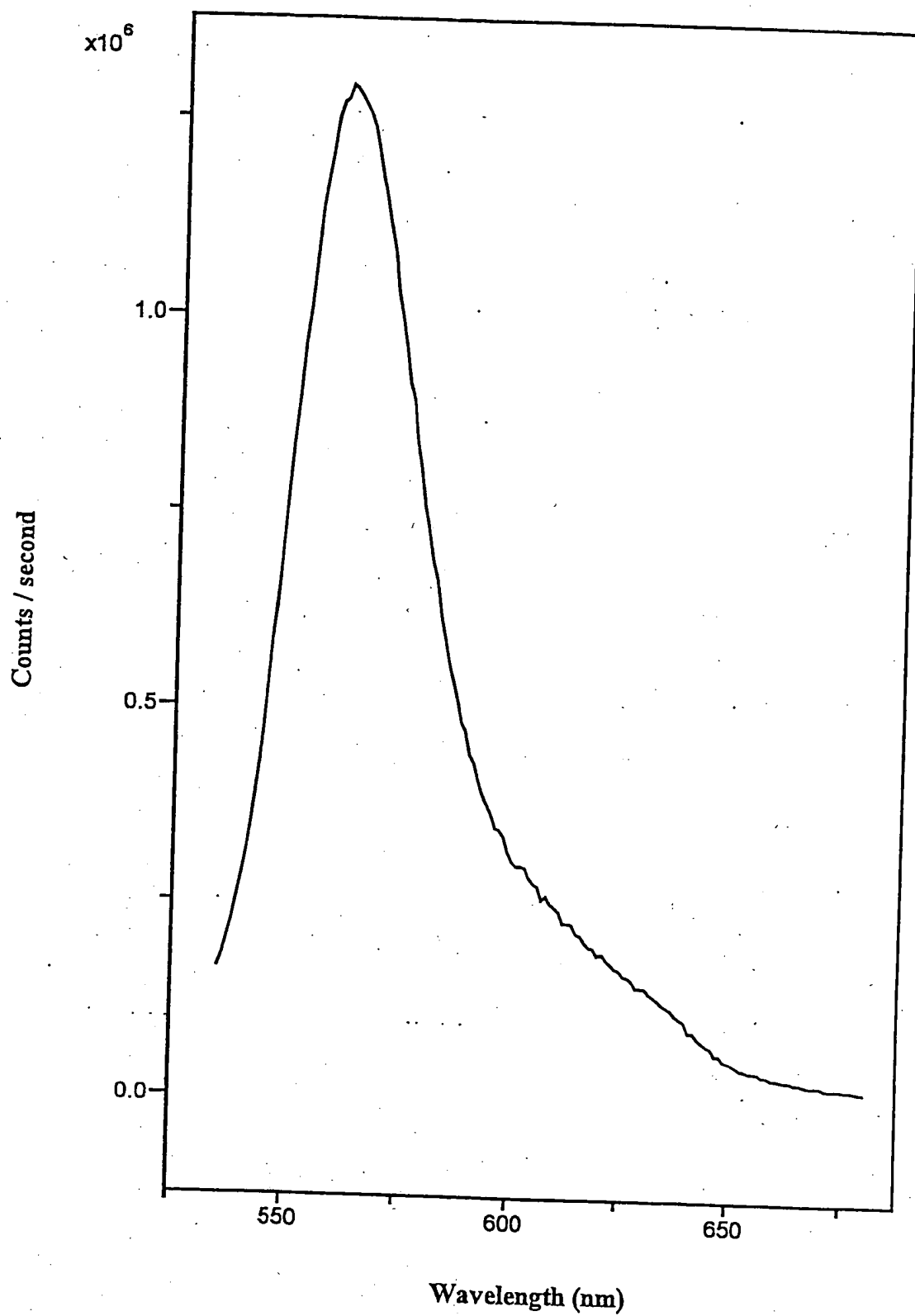


Figure 7

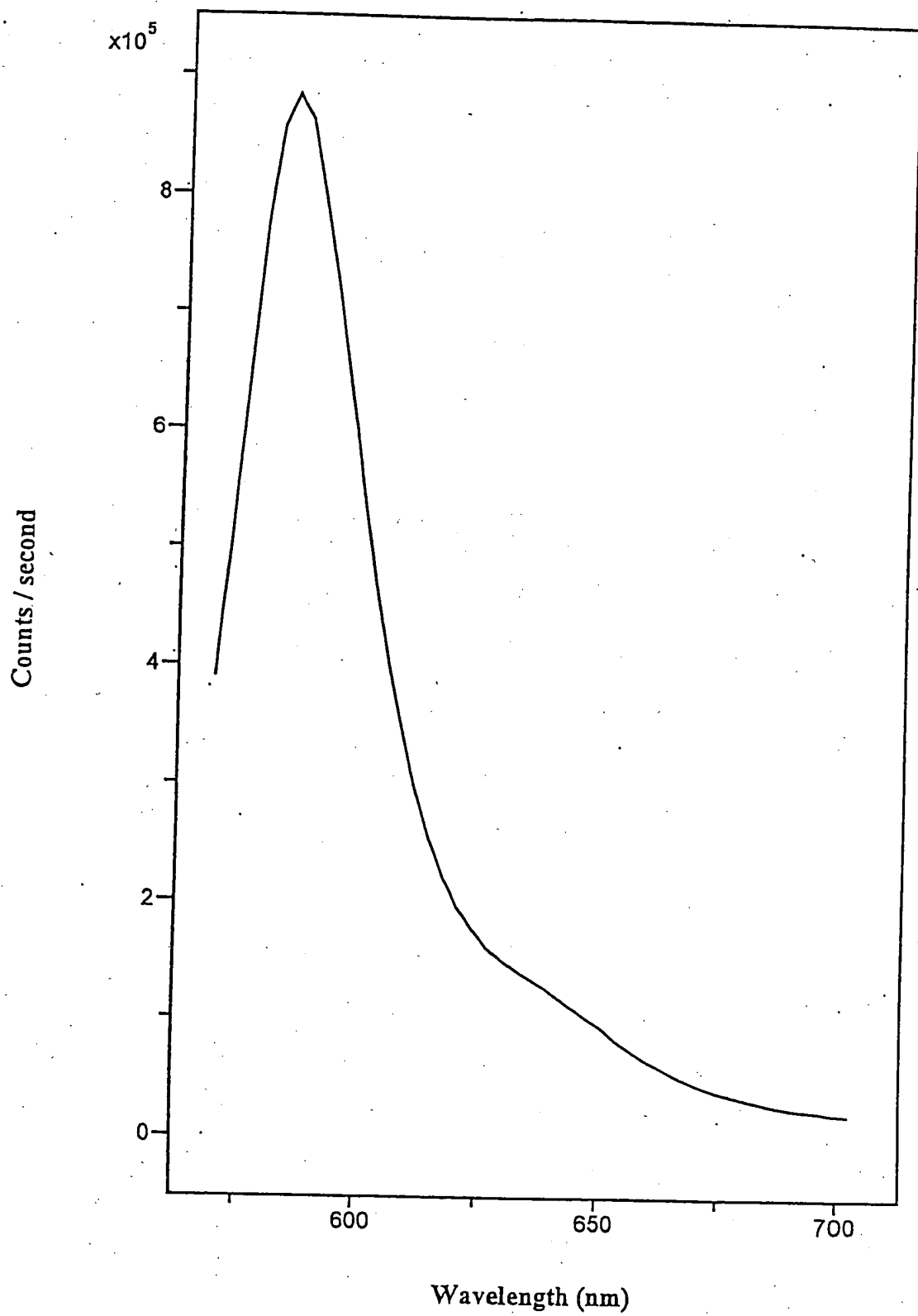


Figure 8

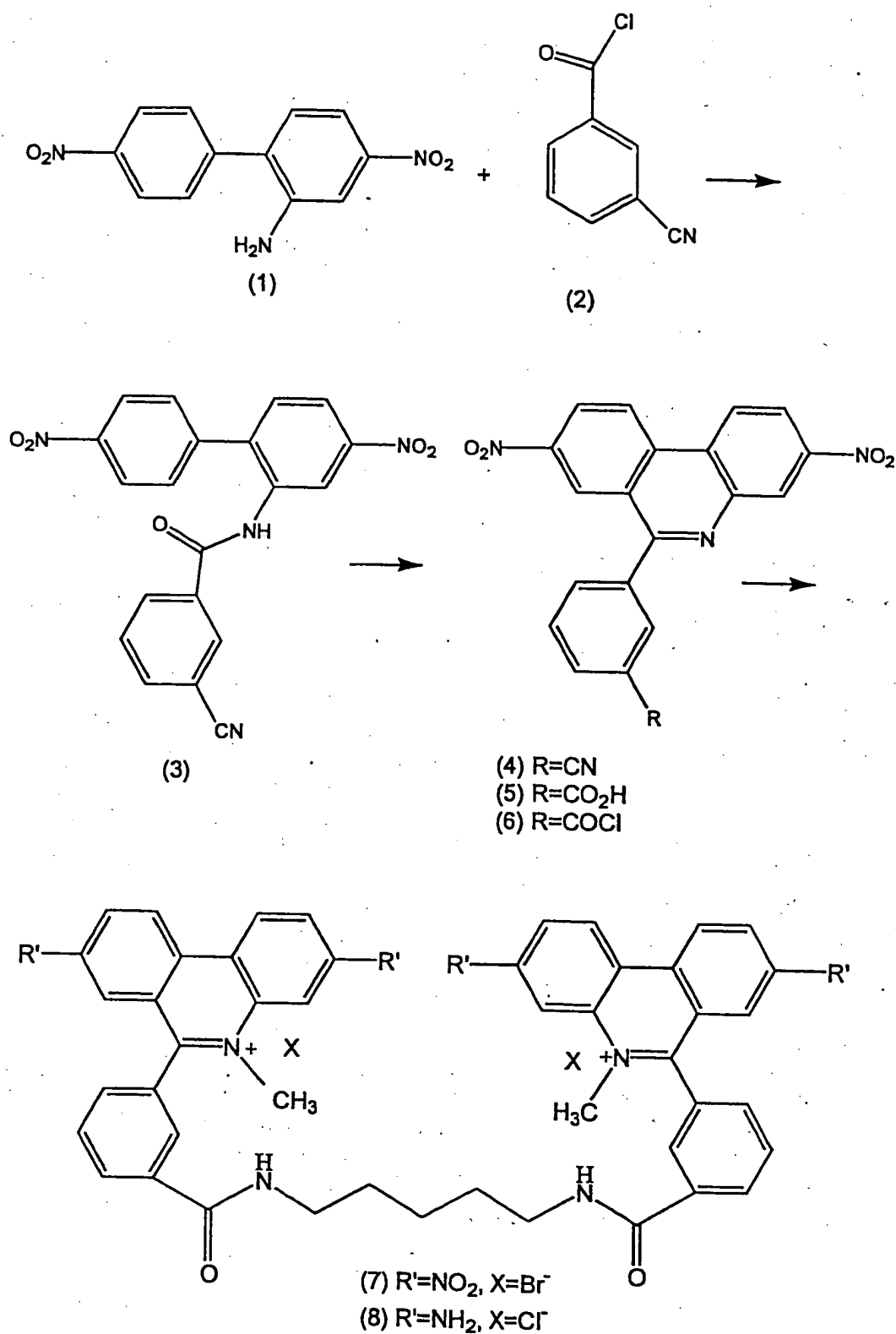
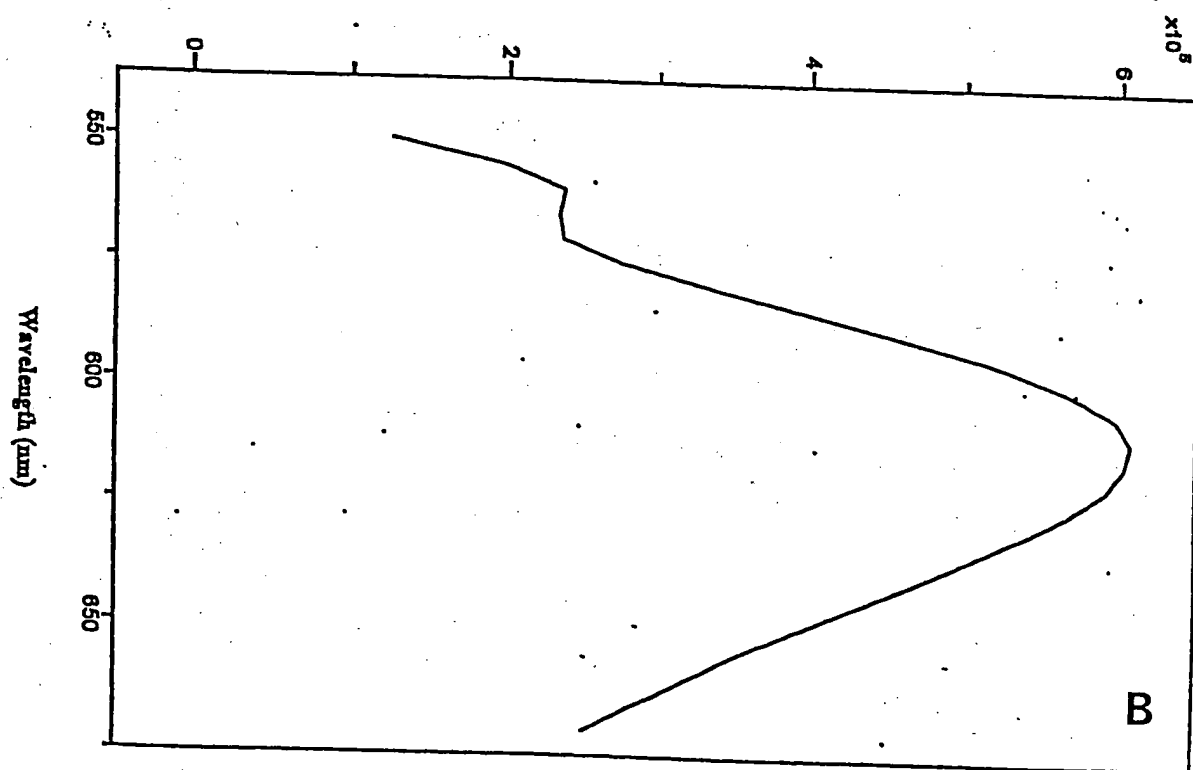
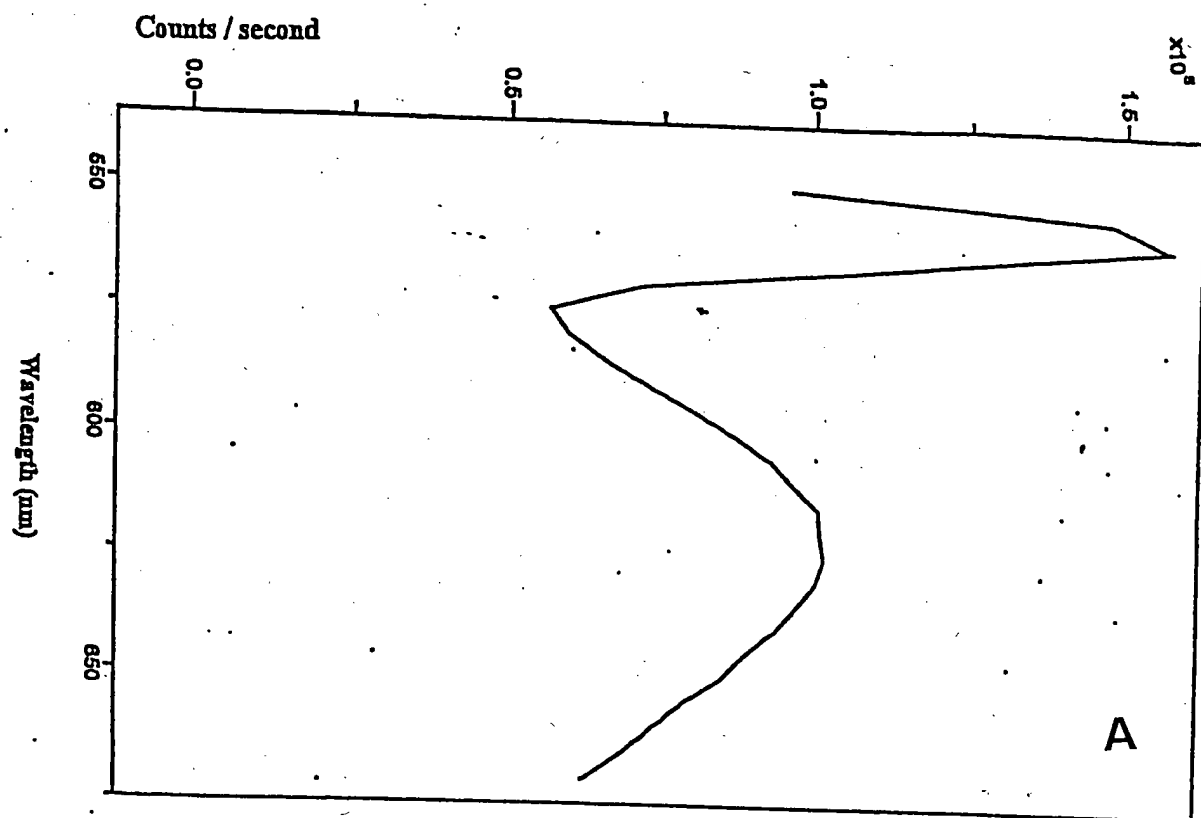
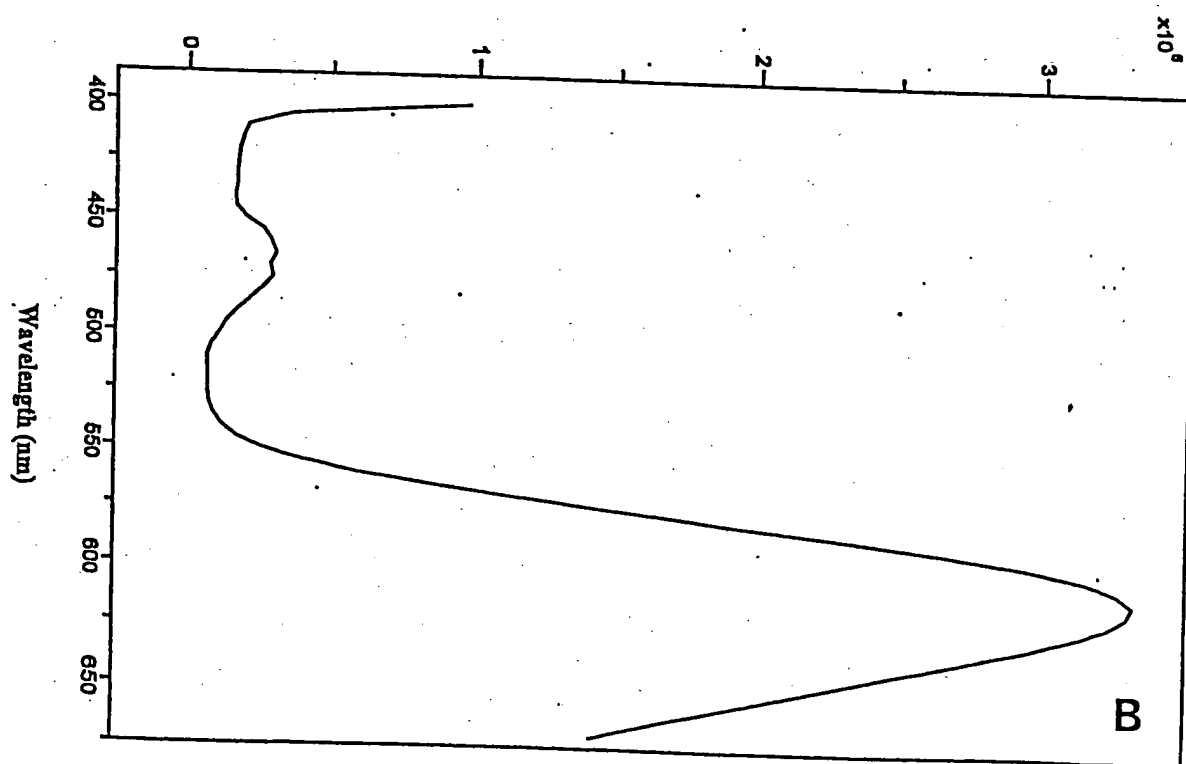
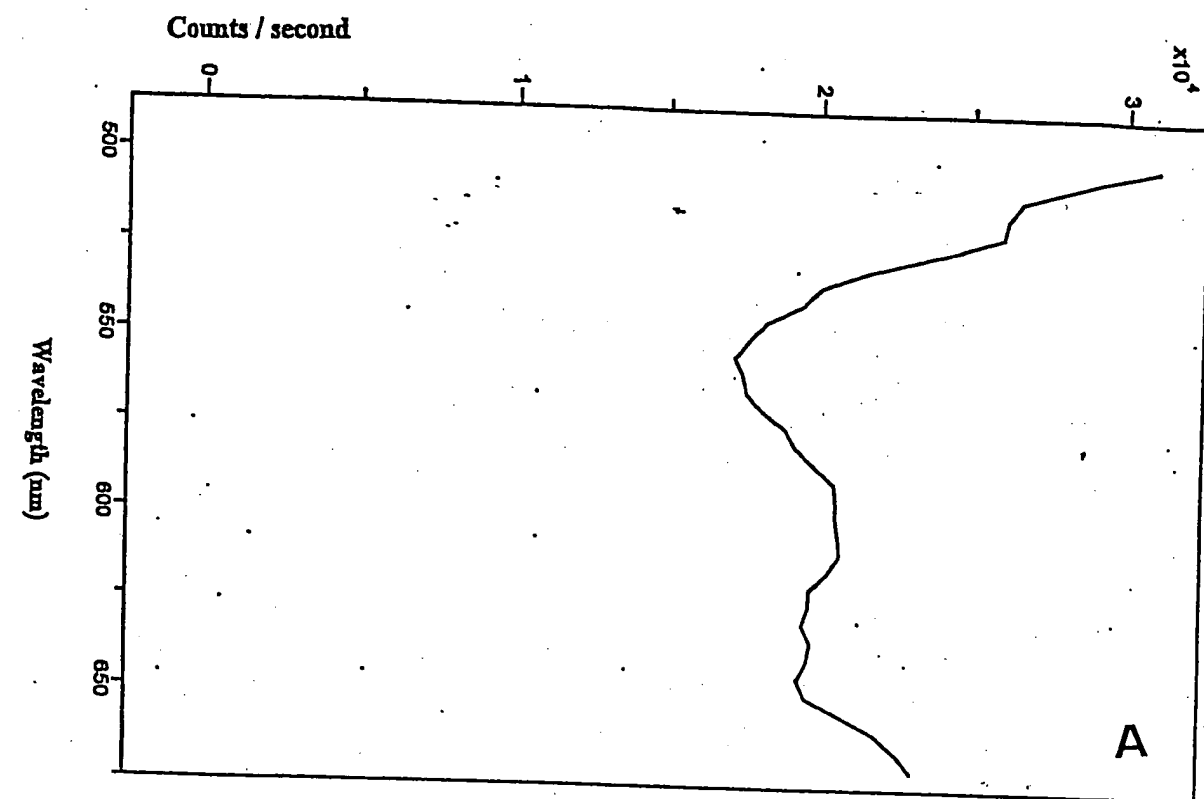


Figure 9



Illumination at 472 nM
Figure 10



Illumination at 350 nM

Figure 11

HIV Anti-sense Amplicon

Forward Primer

catgatccgg atgggagggtg →

Hybridization Probe

taatggtg agtatcccctg cctaactct →*

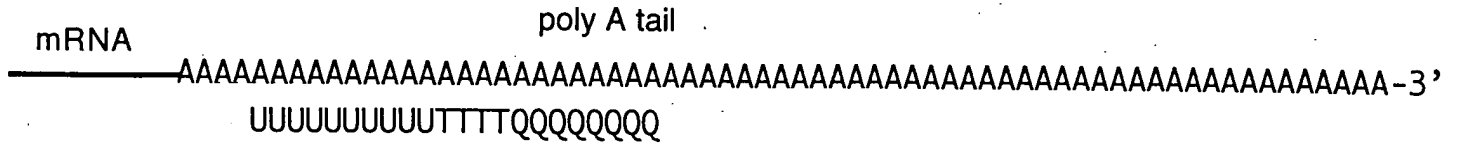
catgatccgg atgggagggtg ggtctgaaac gataatggtg agtatcccctg cctaactcta ttactatcc ggatgtgc
gtactaggcc taccctccac ccagactttg ctattaccac tcataggac ggattgagat aagtgatagg cctacacg

← agat aagtgatagg cctacacg

Reverse Primer

Figure 12

A) Binding of CNAC to poly A tail



CNAC

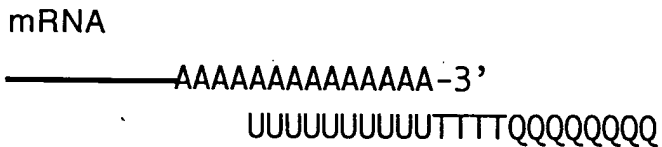
U = Uridine (ribonucleotide)

T = Thymidine (deoxyribonucleotide)

Q = Inosine (ribonucleotide)

B) elimination of poly A segment by RNase H

RNase H



CNAC

C) Incorporation of primer binding site by template dependent extension of analyte

Reverse Transcriptase



CNAC

D) Removal of CNAC and binding of primer with promoter sequence



Figure 13

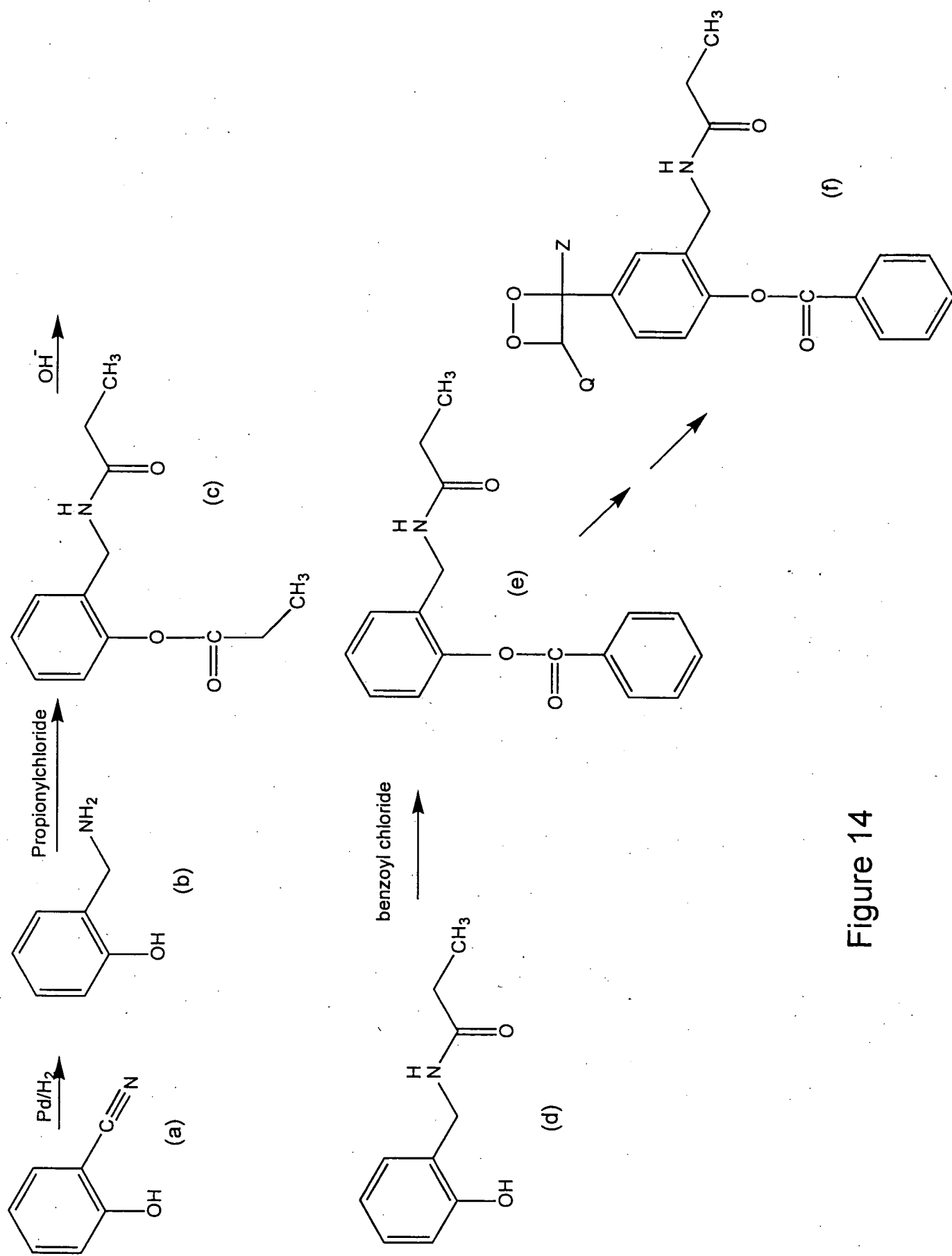


Figure 14

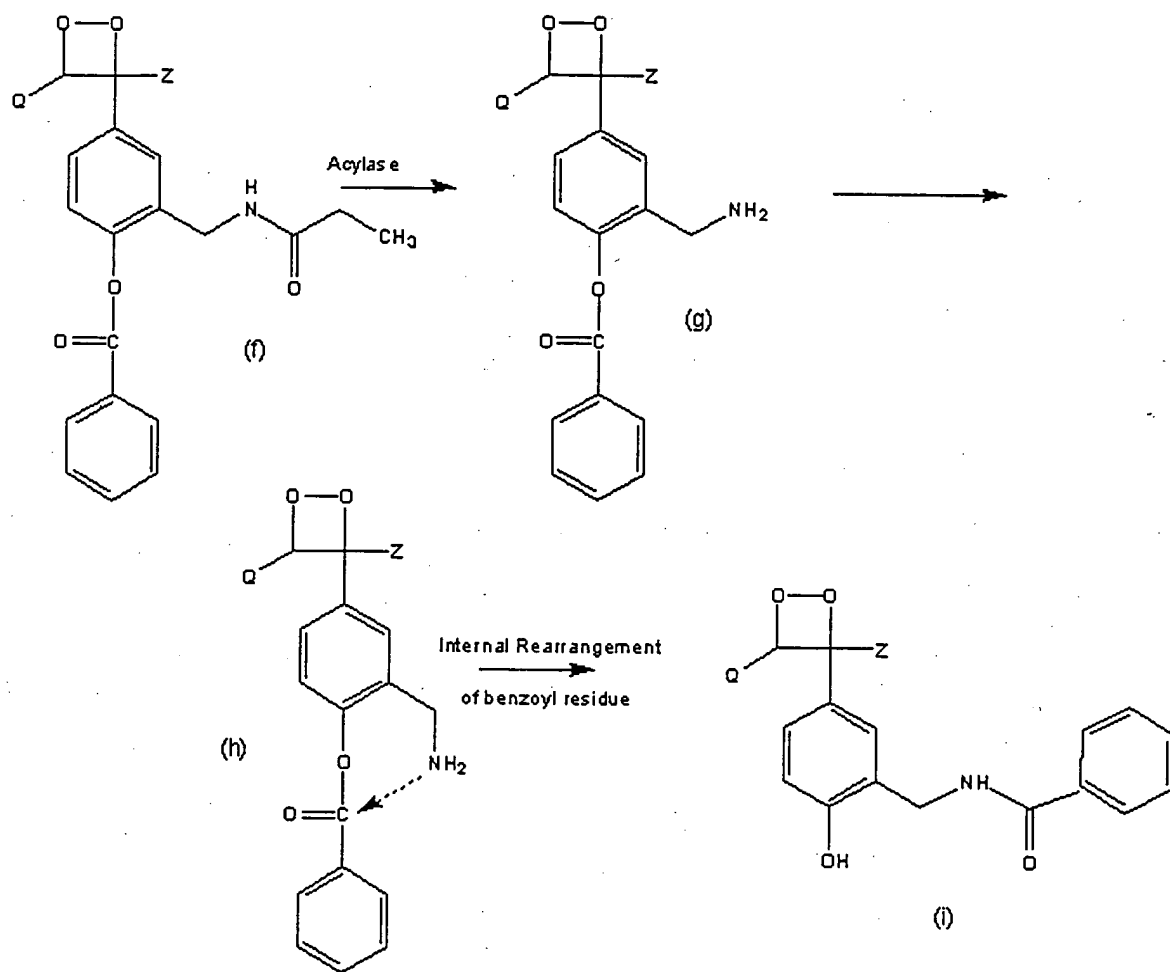


Figure 15